

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/05782

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09K11/06 H01L51/30 C08G73/06 C08L79/04 H05B33/14
H01B1/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09K H01L C08G C08L H05B H01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094910 A (STANFORD RES INST INT) 28 November 2002 (2002-11-28) the whole document	1-19
X	BOUCARD V ET AL: "A SOLUBLE GREEN-LIGHT-EMITTING ALTERNATING COPOLYMER WITH ACCEPTOR-SUBSTITUTED BICARBAZYL UNITS" MACROMOLECULES, AMERICAN CHEMICAL SOCIETY. EASTON, US, vol. 32, no. 14, 13 July 1999 (1999-07-13), pages 4729-4731, XP000833934 ISSN: 0024-9297 figure 1	1-19

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another claim or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

8 April 2004

Date of mailing of the international search report

20/04/2004

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Int. Patent Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 800 080 A (THERAPEUTIQUES SUBSTITUTIVES) 27 April 2001 (2001-04-27) formula 3; claims; examples -----	1-19
P,A	GB 2 376 469 A (SAMSUNG SDI CO LTD) 18 December 2002 (2002-12-18) the whole document -----	
A	EP 0 180 412 A (CHEVRON RES) 7 May 1986 (1986-05-07) the whole document -----	1-19
A	ZHANG C ET AL: "BLUE ELECTROLUMINESCENT DIODES UTILIZING BLENDS OF POLY(P-PHENYLPHENYLENE VINYLENE) IN POLY(9-VINYLCARBAZOLE)" SYNTHETIC METALS, ELSEVIER SEQUOIA, LAUSANNE, CH, vol. 62, 1994, pages 35-40, XP000195648 ISSN: 0379-6779 the whole document -----	1-6

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1 (part) - 19 (part)

Present claims 1-19 relate to an extremely large number of possible devices, compounds and methods. Support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the devices, compounds and methods claimed.

Moreover, present claims 1-19 contain so many options, variables, possible permutations and provisos that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible.

In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Consequently, the search has been carried out for those parts of the claims 1-19 which appear to be supported, disclosed, clear and concise, namely those parts relating to the devices, compounds and methods based on the polymers and copolymers comprising a bicarbazole unit as described in the examples 7, 8, 9, 10, 11 and a reasonable generalisation thereof.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1 (part) - 19 (part)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02094910	A	28-11-2002	US 2002193551 A1 EP 1401916 A1 WO 02094910 A1 US 2003013843 A1	19-12-2002 31-03-2004 28-11-2002 16-01-2003
FR 2800080	A	27-04-2001	FR 2800080 A1	27-04-2001
GB 2376469	A	18-12-2002	KR 2002094735 A JP 2003012777 A US 2003008175 A1	18-12-2002 15-01-2003 09-01-2003
EP 0180412	A	07-05-1986	US 4620943 A CA 1241147 A1 DE 3585077 D1 EP 0180412 A2 JP 61159424 A	04-11-1986 23-08-1988 13-02-1992 07-05-1986 19-07-1986